

## **REMARKS/ARGUMENTS**

The Applicant thanks the Examiner for the Office Action dated May 15, 2006.

### **Claim Amendments**

Claims 1, 13 and 25 have been amended to specify that the printhead is a MEMS injet printhead and that the nozzle chambers are mounted on a silicon CMOS substrate. Basis for this amendment can be found in, for example, Figures 17-20 and US Application No. 10/302,274, which is incorporated into the present application by reference (page 17, line 1).

The Applicant has amended a typographical error: claim 33 should have been numbered claim 32. Therefore, claims 33 to 37 have been renumbered claims **32 to 36**, including claim dependencies. The Applicant submits that this amendment introduces no new matter.

### **Claim Objections**

Claim 14 has been cancelled.

### **Claim Rejections – 35 USC § 102**

The subject-matter of amended claims 1, 13 and 25 is not anticipated by the disclosure of Torpey. Torpey describes a typical low-resolution printhead having components (*e.g.* nozzle unit 18, chamber unit 16, reservoir unit 19, carrier bar 32) all formed from either plastics or ceramics.

By contrast, the printhead of the present invention is a MEMS inkjet printhead (*i.e.* formed by high-resolution photolithographic etching/deposition steps) having a ceramic nozzle chamber mounted on a silicon CMOS substrate.

### **Claim Rejections – 35 USC § 103**

It is further submitted that the present invention is not obvious in view of Torpey either. Torpey merely represents traditional prior art for low-resolution piezoelectric printheads. Torpey teaches construction of such printheads from moldable plastics or machinable ceramics.

However, the present invention relates to MEMS printheads, which are formed from photolithographic etching/depositions steps performed on a silicon wafer. MEMS printheads are characterized by their high density of nozzles and high resolution (*e.g.* 1600 dpi). Hitherto, it had not been suggested in the prior art to construct a MEMS printhead by forming ceramic nozzle chambers on a silicon CMOS substrate. Moreover, Torpey does not provide this suggestion to the person skilled in the art.

Usually, MEMS printheads have nozzle chambers defined within the silicon wafer substrate. In the present invention the nozzle chambers are mounted on the silicon substrate. There is nothing in Torpey teaching the skilled person to make this modification to MEMS inkjet printheads. Accordingly, it is submitted that the present invention is not obvious in view of Torpey.

It is respectfully submitted that all of the Examiner's objections have been successfully traversed. Accordingly, it is submitted that the application is now in condition for allowance. Reconsideration and allowance of the application is courteously solicited.

Very respectfully,

Applicant:



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